DISEASE OF ROSE AND MERIGOLD

Session-20

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DISEASE OF ROSE
POWDERY MILDEW

CAUSAL ORGANISM:

*Sphaerotheca pannosa var. rosae*

SYMPTOMS

- The infected leaves show grayish powdery fungal growth.
- Rolling of leaf margins with the onset of sprouting season.
- Affected leaves become curled and distorted.
- Badly infected flower buds fail to open.
- Infected floral parts become discoloured, dwarfed and dried.
SURVIVAL AND SPREAD

• P.I: Mycelium in dormant buds and shoots or as cleistothecia
• S.I: Wind borne conidia

MANAGEMENT

• Collect and destroy infected plant debris
• Four sprays with wettable S@0.3% or carbendazim@0.1% or Dinocap@0.1% at 10 days interval
• Resistant varieties: Ashwini, Ambika, Angeles, American pride, Surabhi
POWDERY MILDEW OF ROSE
BLACK SPOT

CAUSAL ORGANISM – Diplocarpan rosae
(Anamorph: Marssonina rosae)

Symptoms

• Dark brown tar coloured spots with fringed borders.
• Spots coalesce forming large patches.
• Infected leaves turn brown and defoliate.
• Fungus may also attack stems and flowers of rose.
• On stems, infected areas are blackened with blistered appearance dotted with pustules.
SURVIVAL AND SPREAD

• Pycnidia or ascospores in infected plant debris
• Wind borne conidia

MANAGEMENT

• Affected parts should be collected and destroyed
• Spray Tridemorph @0.025% or benomyl @0.1% at weekly intervals starting with the sprouting of the plants till new foliage appears.
• Shade and extensive irrigation should be avoided.
• Resistant varieties: Bebe bune, coronado , Grand opera, sphinx.
BLACK SPOT OF ROSE
DIE-BACK

CAUSAL ORGANISIM – *Diplodia rosarum*

SYMPTOMS

- Infection starts from the pruned surface of the twigs.
- The infected portion become brown to dark brown or black.
- Infected twig dries from tip downwards.
- Infection spreads from twig to main stem and roots and finally whole plant is killed.
- Older plants and neglected bushes are more frequently attacked.
SURVIVAL AND SPREAD

• Pycnidia present in dead twigs
• Conidia through irrigation water

MANAGEMENT

• Diseased twigs should be carefully removed and destroyed.
• After pruning the cut end should be protected with chaubattia paste.
• Spray Difolatan@0.2% or mancozeb@0.2% or Chlorothalonil@0.2% in early September and late October.
• Resistant varieties: Blue moon, Red gold, Summer queen, etc.
DISEASES OF MERIGOLD
(BOTRYTIS BLIGHT)

Symptom:
- Flower petal become water soaked and become brown.
- Affected parts become necrotic and die.
- A gray mass of spores develops on necrotic tissue during wet conditions.

Causal organism: *Botrytis cinerea*

Sub-division: *Deuteromycotina*

Disease cycle:
- **Primary Infection**: By infected flower
- **Secondary Infection**: Conidia

Favourable condition: High humidity and rainy condition favour the disease development

Management:
- Remove all dead and dying plant parts (particularly blossoms) on and around plants.
- Avoid overhead irrigation or apply such that plants are not wet for extended periods of time.
- Space plants for good air circulation.
SYMPTOM ON FLOWER